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EXAMINER	
YUEN, KAN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/764,816	WU ET AL.	
	Examiner	Art Unit	
	KAN YUEN	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/19/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-6, 9, 14, 15, 19, 20, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (Pat No.: 6985444), in view of Arnold et al. (Pat No.: 7295570).

For claim 1, Rosen disclosed the method of determining a number of code violations of the digital subscriber line (Rosen see column 12, lines 15-35, and see fig. 2). As shown in the reference, the system is evaluating what data rate a DSL line will support. The data rate is measured based on the estimated characteristic of the line, and these characteristics are insertion loss of the line, phase imbalance of the line, the length of the line, and the line gauge. The line characteristics can be interpreted as the code violations; determining a first estimated data packet throughput value of the digital subscriber line using a first profile based on the number of code violations; determining a second estimated data packet throughput value of the digital subscriber line using a second profile based on the number of code violations **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** As shown in the figure, each line is evaluated based on their transmission data rate. Each line is classified using different service categories represented by difference colored codes. The data rate is the throughput. Different categories represents first and second profiles; and selecting, from the first profile and the second profile, to be applied to the digital subscriber line based on a comparison of the first estimated data packet throughput value and the second estimated data packet throughput value **(see column 13, lines 20-67, and see fig. 3,**

unit 90). The process 2 shown in fig. 3, step 90 selects next service provider defined service category. Each service category is defined with a color-code, wherein color gray represents line measurements falls outside of system, and color green represents line supports the service package, and therefore green has the highest estimated data rate.

However, Rosen silent on method of selecting a profile that has the highest estimated data packet throughput value at a particular measured code violation of the digital subscriber line. Arnold et al. from the same or similar fields of endeavor teaches the method of selecting a profile that has the highest estimated data packet throughput value at a particular measured code violation of the digital subscriber line **(column 5, lines 10-67, fig. 2).** The profile 60 of a particular profile sequence or a particular measured code violation may be chosen according to any suitable selection procedure to yield any suitable order that allows network device 24 to determine a profile for an interface. For example, the profile 60 may be selected based on a selection procedure such that network device 24 first attempts to establish a link at the fastest rate. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Arnold et al. in the network of Rosen. The motivation for using the method as taught by Arnold et al. in the network of Rosen being that it increases the maximum rate utilization at all time.

Regarding claim 2, Rosen disclosed the method of applying the selected profile to the digital subscriber line **(see column 7, lines 16-35).** As the result, a profile is selected to the DSL.

Regarding claim 3, Rosen disclosed the method of the selected profile is the first profile and wherein the first estimated data packet throughput value is greater than the second estimated data packet throughput **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** As shown in the figure, each line is evaluated based on their transmission data rate. Each line is classified into different categories represented by difference colored codes. The data rate is the throughput. For example, the colored code green is the first selected profile, wherein the second selected profile is the colored code gray. Green has higher data rate than Gray.

Regarding claim 4, Rosen disclosed the method of determining a third estimated data packet throughput value associated with a third profile based on the number of code violations **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** The yellow colored code is the third profile.

Regarding claim 5, Rosen disclosed the method of determining a plurality of estimated data packet throughput values associated with a plurality of profiles based on the number of code violations and wherein a first set of the plurality of profiles correspond to a first data line transmission speed and a second set of the plurality of profiles correspond to a second data line transmission speed **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** As shown in the figure, each line is evaluated based on their transmission data rate. Each line is classified into different categories represented by difference colored codes. The data rate is the throughput. Each colored code profile has different data transmission speed.

Regarding claim 6, Rosen disclosed the method of a third set of profiles correspond to a third data line transmission speed **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** The yellow colored code is the third profile.

Regarding claim 9, Rosen disclosed the method of generating a graphical display that illustrates the first estimated data packet throughput value, the second estimated data packet throughput value, and the number of code violations (Arnold et al. column 5, lines 10-67, fig. 2). The report generator 52 generates reports and transmits to computer system 54 to display reports to users.

For claim 14, Rosen disclosed the method of the first set of data packet throughput points form a first display curve, the second set of data packet throughput points form a second display curve, and wherein the display curves are displayed in a manner to allow selection of a profile having the highest data packet throughput for a selected number of code violations **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** As shown in the figure, each line is evaluated based on their transmission data rate. Each line is classified into different categories represented by difference colored codes. The data rate is the throughput. Although the reference did not disclose the curve of each profile, however the reference disclosed different classes of lines. Therefore, we can interpret that the colored codes are corresponding to display curves, which displays the highest data packet rate for a selected number of code violations.

For claim 15, Rosen also disclosed the method of the number of code violations is correlated with a level of noise present on the digital subscriber line **(see column 12,**

lines 15-35, and see fig. 2). As shown in the reference, the system is evaluating what data rate a DSL line will support. The data rate is measured based on the estimated characteristic of the line, and these characteristics are insertion loss of the line, phase imbalance of the line, the length of the line, and the line gauge. The line characteristics can be interpreted as the noise.

Regarding claim 19, Rosen disclosed the method of periodically using an automated system to retrieve measurements of code violations for each digital subscriber line in a group of digital subscriber lines **(see column 5, lines 48-55).** In the reference, the automatic measurement system is installing to measure the line status; determining estimated data packet throughput values associated with each of a plurality of different available profiles wherein the estimated data packet throughput values are based on the measurements of code violations for each of the digital subscriber lines in the group of digital subscriber lines **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** As shown in the figure, each line is evaluated based on their transmission data rate. Each line is classified into different categories represented by difference colored codes. The data rate is the throughput; and selecting a profile for each digital subscriber line in the group of digital subscriber lines wherein each profile is selected based on the estimated data packet throughput values **(see column 13, lines 20-67, and see fig. 3, unit 90).** The process 2 shown in fig. 3, step 90 selects next service provider defined service category. Each service category is defined with a color-code, wherein color gray represents line measurements falls outside of system, and

color green represents line supports the service package, and therefore green has the highest estimated data rate.

However, Rosen silent on the method of selecting a profile that has the highest estimated data packet throughput value at a particular measured code violation of each digital subscriber line. Arnold et al. from the same or similar fields of endeavor teaches the method of selecting a profile that has the highest estimated data packet throughput value at a particular measured code violation of each digital subscriber line **(column 5, lines 10-67, fig. 2).** The profile 60 of a particular profile sequence or a particular measured code violation may be chosen according to any suitable selection procedure to yield any suitable order that allows network device 24 to determine a profile for an interface. For example, the profile 60 may be selected based on a selection procedure such that network device 24 first attempts to establish a link at the fastest rate. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Arnold et al. in the network of Rosen. The motivation for using the method as taught by Arnold et al. in the network of Rosen being that it increases the maximum rate utilization at all time.

Regarding claim 20, Rosen disclosed the method of each profile is selected that has the highest estimated data packet throughput value **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** As shown in the figure, each line is evaluated based on their transmission data rate. Each line is classified into different categories represented by difference colored codes. In this case the colored green code has the highest rate.

Regarding claim 22, Rosen disclosed the method of applying the selected profile to the digital subscriber line **(see column 7, lines 16-35).** As the result, a profile is selected to the DSL.

Regarding claim 23, Rosen disclosed the method of a controller including memory and a processor **(see column 9, lines 38-55, and see fig. 1).** As shown in figure 1, the test unit 2 comprises a memory for storage, and unit 5 is considered as the processor; a code violation measurement unit responsive to digital subscriber lines, the code violation measurement unit to provide code violation data associated with each of the digital subscriber lines **(see column 12, lines 15-35, and see fig. 2).** As shown in the reference, the system is evaluating what data rate a DSL line will support. The data rate is measured based on the estimated characteristic of the line, and these characteristics are insertion loss of the line, phase imbalance of the line, the length of the line, and the line gauge. The line characteristics can be interpreted as the code violations; and a profile database to store a plurality of profiles including a first profile and a second profile **(see column 9, lines 38-55, and see fig. 1).**

However, Rosen silent on the method of a terminal device responsive to the controller, the terminal device configured to display a graphical report the graphical report including a first profile curve illustrating data packet throughput values with respect to code violation data for the first profile and a second profile curve illustrating data packet throughput values with respect to code violation data for the second profile; wherein the controller selects a profile from the profile database that has the highest

data packet throughput value at a particular measured code violation for at least one of the digital subscriber lines.

Arnold et al. from the same or similar fields of endeavor teaches the method of a terminal device **(Arnold et al. fig. 2, network device 24)** responsive to the controller, the terminal device configured to display a graphical report the graphical report including a first profile curve illustrating data packet throughput values with respect to code violation data for the first profile and a second profile curve illustrating data packet throughput values with respect to code violation data for the second profile **(column 9, lines 15-35).** The report generator 52 generates reports describing the profiles for each interface 40, and may output reports through computer system 54. A report may describe the configured profile of a link that has been established at interface 40, the running profile of a link that network device 24 is attempting to establish at interface 40, such that the communication rate of the link may be included in the profile. As illustrated in table 1, each profile has downstream and upstream rates; wherein the controller **(fig. 2, network device)** selects a profile from the profile database **(fig. 2, memory 48)** that has the highest data packet throughput value at a particular measured code violation for at least one of the digital subscriber lines **(column 5, lines 10-67, fig. 2).** The profile 60 of a particular profile sequence may be chosen according to any suitable selection procedure to yield any suitable order that allows network device 24 to determine a profile for an interface. For example, the profile 60 may be selected based on a selection procedure such that network device 24 first attempts to establish a link at the fastest rate. Thus, it would have been obvious to the person of ordinary skill in the art at

the time of the invention to use the method as taught by Arnold et al. in the network of Rosen. The motivation for using the method as taught by Arnold et al. in the network of Rosen being that it increases the maximum rate utilization at all time.

Regarding claim 24, Rosen disclosed the method of the first profile curve intersects with the second profile curve **(see column 12, lines 38-67, and see fig. 3, unit 135, 145, and 155).** As shown in the figure, each line is evaluated based on their transmission data rate. Each line is classified into different categories represented by difference colored codes. The data rate is the throughput. Since the status of the lines is classified, it's well known to a person of skilled in the art to plot a curve based on the status of lines.

6. Claim 7, is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (Pat No.: 6985444), in view of Arnold et al. (Pat No.: 7295570), as applied to claim 6 above, and further in view of Sweitzer et al. (Pub No.: 2003/0189977).

For claim 7, Rosen and Arnold et al. disclosed all the subject matter of the claimed invention with the exception of the first data line transmission speed is 1536 kbits per second, the second data line transmission speed is 768 kbits per second, and the third data line transmission speed is 384 kbits per second. Sweitzer et al. from the same or similar fields of endeavor teaches the method of the first data line transmission speed is 1536 kbits per second, the second data line transmission speed is 768 kbits per second, and the third data line transmission speed is 384 kbits per second **(see**

paragraph 0040, lines 10-15, and Table 1). Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the method as taught by Sweitzer et al. in the network of Rosen and Arnold et al. The motivation for using the method as taught by Sweitzer et al. in the network of Rosen and Arnold et al. being that each receiving and transmission side displays a highest and lowest transmission rate.

7. Claims 8, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (Pat No.: 6985444), in view of Arnold et al. (Pat No.: 7295570), as applied to claim 5 above, and further in view of Tzannes (Pat No.: 6498808).

For claim 8, Rosen and Arnold et al. disclosed all the subject matter of the claimed invention with the exception of at least one of the first set of the plurality of profiles is an interleaved profile and another of the first set of the plurality of profiles is a non-interleaved profile. Tzannes from the same or similar fields of endeavor teaches the method of at least one of the first set of the plurality of profiles is an interleaved profile and another of the first set of the plurality of profiles is a non-interleaved profile **(see column 21, lines 1-15).** As shown one path is interleaved and the other is non-interleaved. Therefore we can make it obvious that the interleaved path is for the interleaved profile, and the non-interleaved path is for the non-interleaved profile. Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the method as taught by Tzannes in the network of Rosen and Arnold

et al. The motivation for using the method as taught by Tzannes in the network of Rosen and Arnold et al. being that it provides two sets of data. One set of data is transmitted in the non-interleaved path, and other in the interleaved path. The non-interleaved path provides low latency.

Regarding claim 10, Arnold et al. disclosed the method of the graphical display illustrates a first set of data packet throughput points for the first profile and a second set of data packet throughput points for the second profile **(column 5, lines 10-67, fig. 2).** The report generator 52 generates reports and transmits to computer system 54 to display reports to users.

8. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (Pat No.: 6985444), in view of Arnold et al. (Pat No.: 7295570), as applied to claim 1 above, and further in view of Cooper et al. (Pat No.: 6678245).

For claim 11, Rosen and Arnold et al. disclosed all the subject matter of the claimed invention with the exception of the number of code violations are measured during a selected time period. Cooper et al. from the same or similar fields of endeavor teaches the method of the number of code violations are measured during a selected time period **(see column 4, lines 48-62).** Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the method as taught by Cooper et al. in the network of Rosen and Arnold et al. The motivation for

using the method as taught by Cooper et al. in the network of Rosen and Arnold et al. being that it provides service selection based on the time requested by users.

For claim 12, Cooper et al. also disclosed the method of the selected time period is less than thirty minutes **(see column 4, lines 48-62).**

For claim 13, Cooper et al. also disclosed the method of the selected time period is fifteen minutes **(see column 4, lines 48-62).**

9. Claims 16, 17, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (Pat No.: 6985444), in view of Arnold et al. (Pat No.: 7295570), as applied to claim 1 above, and further in view of Lotter et al. (Pat No.: 7218645).

For claim 16, Rosen and Arnold et al. disclosed all the subject matter of the claimed invention with the exception of the data packet throughput is a TCP/IP throughput. Lotter et al. from the same or similar fields of endeavor teaches the method of the data packet throughput is a TCP/IP throughput **(see column 12, lines 9-15).** Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the method as taught by Lotter et al. in the network of Rosen and Arnold et al. The motivation for using the method as taught by Lotter et al. in the network of Rosen and Arnold et al. being that it provides guaranteed data with QoS since TCP/IP is a QoS transmission protocol.

For claim 17, Lotter et al. also disclosed the method of the TCP/IP throughput is determined based on laboratory testing data **(see column 12, lines 9-15).** As shown, the length of a packet can be interpreted as the testing data.

For claim 21, Lotter et al. also disclosed the method of the data packet throughput value is a TCP/IP throughput value **(see column 12, lines 9-15).**

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen (Pat No.: 6985444), in view of Arnold et al. (Pat No.: 7295570), as applied to claim 1 above, and further in view of Aoki (Pub No.: 2003/0033262).

For claim 18, Rosen and Arnold et al. disclosed all the subject matter of the claimed invention with the exception of switching a profile from a previously applied profile to the selected profile on the digital subscriber line. Aoki from the same or similar fields of endeavor teaches the method of switching a profile from a previously applied profile to the selected profile on the digital subscriber line **(see paragraph 0025, lines 1-10).** As shown, the systems include switching equipment 11 to switch users between a lower speed and a higher speed connection environment. Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the method as taught by Aoki in the network of Rosen and Arnold et al. The motivation for using the method as taught by Aoki in the network of Rosen and Arnold et al. being that it provides switching system to switch a user to different level of speed transmission.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAN YUEN whose telephone number is (571)270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2616

KY